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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jonathan Tams

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EXAMINER

LIN, WEN TAI

ART UNIT

PAPER NUMBER

2154

DATE MAILED: 01/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,306

Applicant(s)

TAMS ET AL.

Examiner

Wen-Tai Lin

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/2/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/2/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-6 and 8-29 are presented for examination.
2. It is noted that the pre-amended claims 12 and 17 are not fully complied with the amendment practice which requires added text to be shown by underlining (see 37 CFR 1.121) because claim 12: lines 10-13 and 17-21, and claim 17: lines 24-28 appear to be newly added texts without proper underlining. Correction is required in response to this office action.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Omum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claim 5 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6279037. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

(1) The added feature in the instant application for updating the two first-in first-out (FIFO) data structures in parallel (see line 12 of claim 1) appears to be obvious to claim 1 of Patent No. 6279037 because updating of a FIFO content is performed at any time a new element is added to the FIFO. As such, the first and second FIFOs of Patent No. 6279037 should be updated simultaneously because the system is able to handle two different data streams entering its respective FIFO; and

(2) The added details in claim 1 of Patent No. 6279037 such as “updating a record corresponding to a first conversation in the first set of records; and updating a record corresponding to the first conversation in the second set of records” is considered equivalent to the claim languages “update at least one record in each of the stored first and second sets of records, includes the step of replacing a previous record included in each of the first and second data structures” (see claim 2 of the instant application) because the “conversation” monitored between two devices in a network is in fact what the instant application’s traffic data (see claim 5) is derived from.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 8-9 are under the second paragraph of 35 U.S.C. 112 because the following terms "the first processor" and "the second processor" appear to lack antecedent basis.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Youden; et al.[U.S. Pat. No. 5606359].

7. As to claims 1-2, Youden teaches the invention as claimed including: a method of processing and storing data in a computer system including processor circuitry, and a data storage device [Figs. 2-4; col.5, lines 25-57], the method comprising the steps of:
- storing first and second sets of records in separate first-in, first-out data structures [101, 103, Fig.4], respectively, on the data storage device [100, Fig.4; i.e., the data source], the first and second sets of records being of different data resolutions and

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corresponding to overlapping periods of time [col.7, lines 6-15 and 35-41; col.8, lines 11-26; i.e., since FIFO 103 is used for temporarily storing text and graphic data while FIFO 101 is used for temporarily storing video data, they are of different data resolution];

operating the processor circuitry to receive data collected over a period of time [col.7, lines 6-15 ; i.e., both FIFOs collect data from network ports 104 and 106]; and

operating the processor circuitry to update, in parallel, at least one record in each of the stored first and second sets of records with the received data such that a previous record included in each of the first and second data structures is replaced [note that records in the FIFO pairs are updated in parallel due to the fact that a new data element may push out the oldest data element in the queue].

8. As to claims 3 and 11, Youden further teaches the step of allocating fixed amounts of storage space on the data storage device for storing each one of the first and second first-in, first-out data structures used to store the first and second sets of records [col.5, lines 48-51].

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious

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at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barroux; [U.S. Pat. No. 5923850].

11. As to claims 1-2, Barroux teaches the invention substantially as claimed including: a method of processing and storing data in a computer system including processor circuitry, and a data storage device [Figs. 2-4; col.1, lines 50-67], the method comprising the steps of:

storing first and second sets of records in separate first-in, first-out data structures [note that the task scheduler, 302 of Fig.3, comprises a plurality of FIFOs for temporarily storing collected data], respectively, on the data storage device, the first and second sets of records being of different data resolutions [col.4, lines 19-46; col.5, lines 11-39; e.g., each node may be scheduled to have its own repetition intervals for collecting data];

operating the processor circuitry to receive data collected over a period of time [col.5, lines 15-27]; and

operating the processor circuitry to update, in parallel, at least one record in each of the stored first and second sets of records with the received data such that a previous record included in each of the first and second data structures is replaced [note that records in the FIFO pairs are updated in parallel due to the fact that a new data element may "push out" the oldest data element in the queue when the queue is full].

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Barroux does not specifically teach that the data collected in each node corresponds to overlapping periods of time and that data collected from different nodes are stored in different FIFOs.

However, Barroux teaches that repetition interval for probing may range from minutes to hours [col.5, lines 17-22]. Thus it is obvious to one of ordinary skill in the art that Barroux's integrated resource system [200, Fig.2] could have made use of this long interval to also collect information from other targeted nodes in the same network because Barroux's system is designed for providing snapshot of the current state of the network [Abstract].

Furthermore, since Barroux's integrated resource system [200, Fig.2] has made available a plurality of FIFOs, it would have been obvious to one of ordinary skill in the art to have separately stored information collected from different target nodes because it is easier to manage and analyze the otherwise highly diversified information associated with each target node.

12. As to claim 3, Barroux further teaches the step of allocating fixed amounts of storage space on the data storage device for storing each one of the first and second first-in, first-out data structures used to store the first and second sets of records [note that this is an inherent feature to a FIFO].

13. As to claim 4, Barroux further teaches that the first set of records include hourly records and the second set of records includes daily records [col.5, lines 17-19].

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14. As to claim 5, since the features of this claim can also be found in claims 1-2, it is rejected for the same reasons set forth in the rejection of claims 1-2 above.

Note that although Barroux focuses on collecting data to relating to asset survey.

Barroux does teach, however, that the system is intended for providing the a snapshot of a current state of the network [col.1, lines 50-54], wherein network traffic may effect scheduling the of system resources [col.4, line 61 – col.5, line 10] and SNMP has been widely used for probing network performance [col.1, lines 43-47], thus it would have been obvious to one of ordinary skill in the art that Barroux's system is fully capable of (and therefor extended to) collecting traffic related data [col.19, lines 44-59] because collection of the more dynamic information could facilitate optimal scheduling of Barroux's network resources.

15. As to claim 10, Barroux further teaches that the computer system further includes a display device, the method further comprising the step of displaying data corresponding to overlapping periods of time at different resolutions on the display device [Fig. 6A; col.6, line 59 – col.7, line 7].

16. Claims 6, 8-9 and 11-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barroux [U.S. Pat. No. 5923850], as applied to claims 1-5 and 10-29 above, further in view of Official Notice.

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17. As to claim 6, Barroux further teaches that the network traffic data stored in the buffer includes time stamp information indicating the period of time in which the network traffic data was collected [Fig.7A; col.9, lines 5-32];

Barroux does not specifically teach that updating at least one record in each of the stored first and second sets of records includes the step of examining at least one time stamp included in the buffered network traffic data.

However, Official Notice is taken that it is well known in the art to implement a first-in first out data structure in an existing RAM memory space by tracking the head and tail locations of a circular queue, wherein the head and tail location records the oldest and the newest elements of the queue. Since the oldest and the newest elements are also associated with its respective time stamp, it is obvious to one of ordinary skill in the art that examining the associated time stamp provides an alternative to updating a record of the queue (e.g., by replacing the oldest element with a newly arrived element) because the time stamp associated with each element keeps track of the order (or time) that each element entered the queue.

18. As to claims 8-9, Barroux does not specifically teach the processor circuitry includes first and second central processing units, and wherein the step of operating the processor circuitry to update at least one record in each of the stored first and second sets of records includes the step of operating the first processor to update the first set of records while operating the second processor to update the second set of records.

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However, Official Notice is taken that it is well known in the art to use more than one CPU for performing tasks in parallel. Since Barroux teaches that the network survey process is a time-consuming task [col.1, lines 37-42], it is obvious to one of ordinary skill in the art at the time the invention was made to have employed a plurality of CPUs, each dedicated to the manage/maintenance of data collected in a FIFO, because such a parallelism would reduce the overall survey time.

19. As to claims 11-29, since the features of these claims can also be found in claims 1-10, they are rejected for the same reasons set forth in the rejection of claims 1-10 above.

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Iddon et al. [U.S. Pat. No. 5634009];

Luzzi et al. [U.S. Pat. No. 6321263]; and

Youden et al. [U.S. Pat. No. 5606359].

21. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 days from the mail date of this letter. Failure to respond within the period for response will result in ABANDONMENT of the application (see 35 U.S.C. 133, M.P.E.P. 710.02, 710.02(b)).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (571)272-3969. The examiner can normally be reached on Monday-Friday (8:00-5:00) .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(703)872-9306 for official communications; and

(571)273-3969 for status inquires draft communication.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wen-Tai Lin

December 23, 2004

Wen-Tai Lin
12/23/04